SURGICAL MANAGEMENT OF TRANSITIONAL CELL CARCINOMA IN DOG

Benudhar Mahanand[1], Jayakrushna Das[2] and Bijay Kumar Patra[3]
[1]Assistant professor, [3]Associate Professor and Incharge, Department. of Veterinary Clinical Complex;
[2]Associate professor, Department of Veterinary Surgery and Radiology; College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar (Odisha).
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A 10 year old female dog was presented with intermittent haematuria with normal flow of urine since last 10 days. History revealed that the animal was spayed four years back. After ultrasonographic examination an intraluminal mass extending from mucosa of urinary bladder was observed. The animal was planned for surgery. After following proper pre-surgical procedure, the mass was removed surgically. The Recovery was uneventful.
Keywords: Dog, Intraluminal mass, Spayed, Transitional cell carcinoma.

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Transitional cell carcinoma (TCC) is the most common malignant tumor of the lower urinary tract in dogs and it accounts for approximately 2% of all reported canine tumors (Iwasaki *et al.,* 2019). TCC is having a multifactorial etiology, with risk factors including female sex, neuter status, obesity, and exposure to pesticides (Allstadt *et al*., 2015 and Knapp *et al*., 2014). It is mostly diagnosed in spayed and aged female dogs (Fulkerson and Knapp, 2015). In this case a ten year old female dog was presented for treatment of transitional cell carcinoma in urinary bladder.

Case history and Observations

A female German shepherd of ten years old having 41 kg body weight with showing symptoms of intermittent haematuria with normal flow of urine since 10 days was presented to Veterinary Clinical Complex, College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar for treatment. Physiological parameters like rectal temperature, heart rate, respiration rate were in normal range. Haemato-biochemical parameters were normal. Urine analysis showed presence of blood cells in urine. Radiographic examination showed absence of any caliculi. Upon B-mode, power doppler and color-doppler ultrasonographic examination an intraluminal mass (1.71 x 2.28 cm) extending from mucosa of lumen of dorsal part of urinary bladder was found without any metastasis in other organs (Fig.1 and 2). It was suspected for a case of Transitional cell carcinoma and planned for surgical removal under general anaesthesia.

Surgical Treatment

The animal was prepared for surgery as per standard operating procedure. The animals were administered with inj. glycopyrolate @ 0.01 mg/kgbw intramuscularly, inj. butorphanol @ 0.2 mg/kgbw, inj. dexmedotomidine @ 5mcg/kgbw intravenously as preanaesthesia and inj. Zoletil @ 7.5 mg/kgbw was administred intravenously for induction of anaesthesia. It was maintained using top up dose of zoletil. 1 ml injection of Botropase was administered prior to surgery. A four inch legth midventral skin incision was given one inch vaudal to the navel. Subcutaneous tissue and abdominal muscles were cut to access the abdominal cavity. An 1.5 inch incision was given over the dorsal part of urinary bladder. The mass was located on the dorsal part of urinary bladder. Complete mass

along with the attachment portion in urinary bladder was resected. Bleeding was controlled using application liquid nitrogen and botroclot drop. A Foleys catheter was fixed into urinary bladder. Urinary bladder was closed using No.1-0 chromic catgut in cushing pattern. Abdominal muscles and subcutaneous tissue were sutured separately using no.1 vicryl in simple continous pattern. Skin was apposed using No.1 Trulon in cruciate materess pattern. Post-operatively inj. Ceftrixanoe was given @ 25 mg/kg body weight for five days and inj. Meloxicam @ 0.2 mg/kgbw for three days. Owner was advised to apply E-collar to prevent self mutilation. Skin suture was removed after 12 days of surgery. Excised tissue sample was sent to laboratory for histopathological examination.

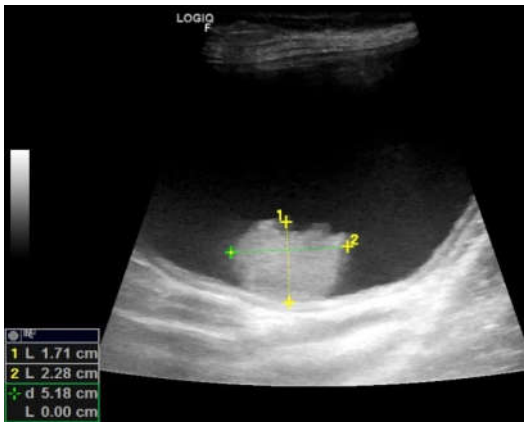

Fig.1-INTRALUMINAL MASS (1.71 X 2.28 CM) IN URINARY BLADDER

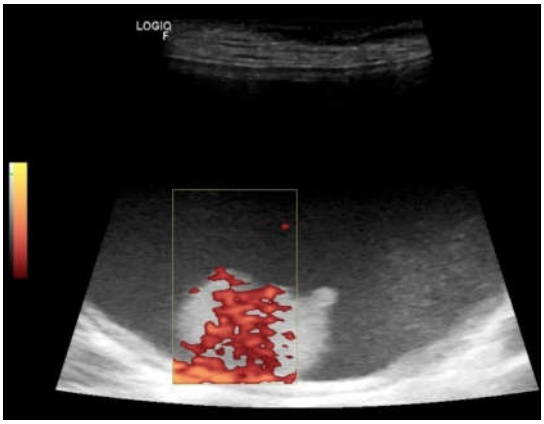

Fig.2. POWER DOPPLER IMAGE OF THE MASS

Results and Dscussion

In this case, the dog had invasive transitional cell carcinoma that was extended to the wall of urinary bladder as also reported by Suwankanit and Manee - in, 2018. There was slight haematuria till 5th day of surgery. Clear urine was observed after day 6. Foleys catheter was removed on day 7 and skin suture was removed 12th post-operative day. Histopathological examination confirmed that it was a case of Transitional cell carcinoma. The animal was followed for 6 months and no complication or no recurrence were found (Fig.3) as also recorded by Bradbury *et al.,* 2021.

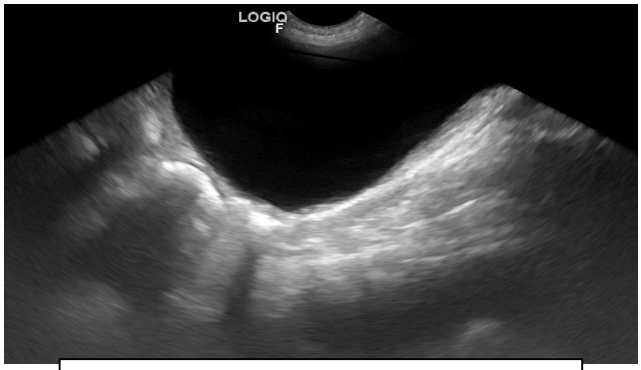

Fig.3. ABSENCE OF RECURRENCE OF GROWTH DURING FOLLOW UP

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